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REMARKS

The November 27, 2002 Office Action was based upon pending Claims 8-15. By this Amendment, Applicants amend Claims 8, 13 and 15, cancel Claim 10 and traverse the rejections over the prior art. Thus, after entry of this Amendment, Claims 8, 9 and 11-15 are pending and presented for further consideration. In view of the following remarks, Applicants respectfully submit that the pending claims are patentably distinguished over the cited references.

Rejections in View of Prior Art

The Examiner rejects each of the pending claims as obvious under 35 U.S.C. § 103(a) over Muka (U.S. Patent No. 6,079,927) in combination with one or more secondary references, including newly cited Hasebe (U.S. Patent No. 5,826,129). As to independent Claims 8, 13 and 15, the Examiner asserts that Muka discloses each limitation except the limitation of moving wafers directly from one cassette to another. The Examiner cites Hasebe as disclosing a device for moving wafers from a cassette to another location "including a second cassette if desired." The Examiner concludes that it would have been obvious to provide Muka's device with the direct transfer abilities taught by Hasebe. For the reasons set forth hereinafter, Applicants respectfully disagree with the Examiner's conclusion.

Applicants concur with the Examiner's assertion that "Muka does not teach the device as moving the wafers directly from one cassette to another." Muka explicitly discloses that wafers are transferred from a cassette or FOUP to a processing system, or vice versa. There is no teaching or suggestion of transferring wafers from one cassette to another cassette.

Without conceding that the remainder of the Examiner's assertions is proper, but to expedite examination and allowance of the present application, Applicants have amended independent Claims 8, 13 and 15 to further distinguish the claimed subject matter over the cited prior art. These claims have been amended to further recite that the chamber comprises a measuring station connected to the chamber that houses the wafer-handling device, and accessed by the wafer-handling device. Furthermore, the claims have been amended to positively recite "sorting" or "to sort" in each pending claim. These amendments are fully supported by the

application as filed. *See, e.g.*, canceled Claim 10 and the sections of the specification quoted below.

One of the several functions accomplished by the preferred embodiment is a sorting function. *See* specification, for example, at page 3, lines 27-30, page 4, lines 14-20. Further, Figure 2 of the present application shows two cassettes 18 and 19 interfacing with the wafer transfer robot, and the specification at page 5, line 25, to page 6, line 4, describes two cassettes at different levels of the turntable 30 being accessed by the wafer transfer robot 24. The wafer transfer mechanism 24 is also referred to as a "sorting device 24."

As to the sorting function, the present specification discloses on page 5, line 25, - page 6, line 7, that

[i]f, for example, cassette 13 which is empty is to be provided with a specific sequence of different types of wafers for treatment in, for example, a furnace, it is placed on turntable 30 using cassette-handling robot 25. Following rotation of turntable 30, cassette 13 is situated in the position of cassette 18. It is then opened. Before this, after this or simultaneously, it is ensured that a cassette containing at least one desired wafer is situated at a different level of turntable 30. . . . Then, the desired wafer is placed in cassette 18 with the aid of wafer-handling device 24. If other wafers are required and are not present in the stock cassette used, this stock cassette is exchanged for another which may come from store 8. In this way, a desired batch is assembled in cassette 18 and is removed again using cassette-handling device 25. After the treatment has finished, the cassette in question can be placed back on turntable 30 via handling device 25 and a wafer can be fed to either the top or the bottom measuring station 16 with the aid of wafer-handling device 24.

Thus, the sorting operation sorts and assembles in one cassette a desired batch and the wafer handling device feeds a wafer to a measuring station. The skilled artisan will readily appreciate that sorting, in the sense described above, is a specialized semiconductor processing function that does not merely involve the "ability" to transfer from one cassette to another, and furthermore that direct transfer in combination with the terms of art "sorting" or "to sort," as recited in the pending claims, captures this distinction over type of transfers disclosed by Muka or Hasebe.

The cited references, alone or in combination, do not disclose or suggest an apparatus or a method where a sorting operation is conducted. Muka nowhere discloses or suggests an

apparatus configured for sorting wafers between two cassettes. Rather, in each instance, in every discussion of a wafer transfer mechanism 32 (Figure 1), 230, 232 (Figures 3 and 4), 252 (Figure 5) and 510, 540, 542 (Figure 8), Muka explicitly discloses that wafers are transferred from a cassette or FOUP to a processing system, or vice versa. There is no teaching or suggestion of transferring wafers directly from one cassette to another cassette.

Hasebe is also completely silent as to any sorting of wafers. Even in embodiments where Hasebe uses a pickup cassette CR and a buffer cassette BR, as shown in Figure 23, there is no sorting of wafers, as that term is understood by the skilled artisan. *See* column 14, lines 42-60.

Moreover, neither of the asserted references, nor any reference of record, teaches or suggests sorting wafers and accessing a measuring station with the same wafer-handling device. Applicants submit that the art contains no motivation to do so, particularly since such tools are designed to maximize throughput. As is well-understood by the skilled artisan, the use of wafer handling device is typically used to the fullest extent possible for the desired function (e.g., measurement) of such tools, and there is no motivation in the art to divert the productivity of the robot (i.e., from transferring wafers to/from the measuring station) to a sorting function.

Accordingly, even if one of ordinary skill in the art were to combine Muka and Hasebe, such a combination would not disclose or suggest each and every limitation recited in amended Claims 8, 13 and 15. The Examiner cites Hasebe (col. 7, lines 21-26) as disclosing a device for moving wafers from a cassette to another location "including a second cassette *if desired*." Similarly, the Examiner states that "[i]t would have been obvious... to modify the method as taught by Muka with the transfer methods as taught by Hasebe et al in order to allow the wafers to be transferred to any one of a number of locations *as required by the operator of the system* to process a set of wafers."

These statements beg the question. Applicants respectfully submit that Muka and Hasebe provide no suggestion to modify Muka or Hasebe to provide for a direct transfer between cassettes. Yet it is the very desirability, which the Examiner assumes in hindsight but does not show from the prior art, that is required for a *prima facie* case of obviousness. "The mere fact that the prior art *could* be so modified would not have made the modification obvious *unless the prior art suggested*

the desirability of the modification.” In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (emphasis added). Such a desirability is not suggested by Muka or Hasebe nor any other reference of record. Accordingly, Applicants respectfully submit that amended Claims 8, 13 and 15 are patentably distinguished over the cited references and respectfully request the Examiner to pass amended Claims 8, 13 and 15 to allowance.

Because Claims 9, 11-12 and 14 depend from independent Claims 8 and 13, respectively, pursuant to 35 U.S.C. § 112, ¶ 4, they incorporate by reference all the limitations of the claim to which they refer. It is therefore submitted that Claims 9, 11-12 and 14 are in condition for allowance at least for the reasons expressed with respect to the respective independent claim, and for their other inventive features. Thus, Applicants respectfully request the Examiner to pass Claims 9, 11-12 and 14 to allowance.

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CONCLUSIONS

In view of the foregoing remarks, Applicants submit that the application is in condition for allowance and respectfully requests the same. If, however, some issue remains that the Examiner feels can be addressed by Examiner's Amendment, the Examiner is cordially invited to call the undersigned for authorization.

Respectfully submitted,

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